



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------------|------------------|
| 10/791,669 | 03/03/2004 | Fumiko Shiraishi | Q80181 | 2713 |
| 23373 7590 03/23/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037 | | | EXAMINER SHEEHAN, JOHN P | |
| | | | ART UNIT 1742 | PAPER NUMBER |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
| 3 MONTHS | | 03/23/2007 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/791,669

Applicant(s)

SHIRAISHI ET AL.

Examiner

John P. Sheehan

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 3-8, 10, 11, 13, 14, 16, 17, 19, 20, 22, 23 and 25-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 9, 12, 15, 18, 21 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>March 3, 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. In the original restriction requirement claim 25 was grouped in the Group I invention, however as applicants have pointed out, claim 25 depends from claim 22 which is included in the Group II invention. In view of this, the Examiner has modified the original restriction requirement by placing claim 25 in the Group II invention.
2. In the response submitted January 19, 2007 applicants amended claim 20 to depended from claim 6. In view of this, the Examiner has modified the original restriction requirement by placing claim 20 in the Group III invention.
3. In view of the above changes to the grouping of the claims, the claims, for the purpose of the restriction requirement, are now grouped as follows:
 - Group I consists of claims 1, 2, 9, 12, 15, 18, 21, and 24;
 - Group II consists of claims 3 to 5, 8, 10, 13, 16, 19, 22 and 25;
 - Group III consists of claims 6, 7, 11, 14, 17, 20, 23 and 26; and
 - Group IV consists of claims 27 and 28.
4. Applicant's election without traverse of the Group I invention which now consists of claims 1, 2, 9, 12, 15, 18, 21 and 24 in the reply filed on January 19, 2007 is acknowledged.

Priority

5. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

6. The listing of the references included with the Information Disclosure Statement submitted March 3, 2004 indicates that translations of each of the Japanese Patent Documents were submitted. It is noted that, in addition to the copies of the Japanese language documents, the Examiner received English language abstracts of each of the Japanese documents, however, the Examiner did not receive complete translations of the Japanese references.

Claim Rejections - 35 USC § 103

7. Claims 1, 2, 9, 12, 15, 18, 21, and 24 are rejected under 35 U.S.C. 103(a) as being obvious over each of Waki et al. (Waki '978, US Patent No. 7,066,978), Hattori et al. (Hattori '895, US Patent No. 6,994,895) or Hattori et al. (Hattori '357, US Patent Application Publication No. 2004/0033357) alone or each taken in view of Naone (Naone '968, US Patent No. 6,827,968).

The applied reference has a common Assignee and common inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed

Art Unit: 1742

but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Each of Waki '978, Hattori '895 and Hattori '357 teaches a process which, with the exception of the peripheral speed of the stirring vane, is the same as the instantly claimed process (for example, Waki '978, column 13, Example 1-1; Hattori '895, columns 16 and 17, Examples 1-4; and Hattori '357, page 10, Example 1). Each of these references is silent with respect to the peripheral speed of the stirring vane. However, there is nothing in the record to indicate that the claimed stirring speed differs from the stirring speed of these references.

Naone '968 teaches that when mixing two reactants high peripheral stirring vane speed above 3 m/s and especially 25 m/s or higher improves the dispersion of the reactants (column 2, line 36 to column 3, line 7). In view of Naone '968's disclosure, one of ordinary skill in the art would have been motivated to use high speed stirring

Art Unit: 1742

greater than 3 m/s and especially 25 m/s or more so as to improve the dispersion of the reactants and improve the reaction efficiency.

Prior Art Cited of Interest

8. The following references although not used in this Office action, have been included in that each reference teaches a mixing speed that is encompassed by the mixing speed recited in the instant claims.

Cairns teaches a mixing speed of 15/m (column 2, line 22).

Suzuki et al. teaches a mixing speed of 20 m/s (paragraph 00183).

Yamashita et al. teaches mixing speeds of 50 m/s and 75 m/s (paragraphs 0129, 0134 and 0136).

Harada et al. teaches a mixing speed of 40 m/s (paragraph 0036).

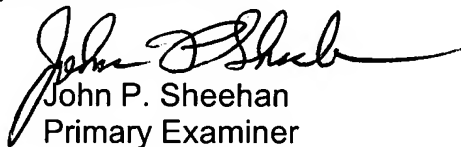
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John P. Sheehan
Primary Examiner
Art Unit 1742

JPS